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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,488	02/11/2002	George Jyh-Shann Chou	17714 (MHM 13417US01)	6030

7590 04/19/2006

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EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/073,488

Applicant(s)

CHOU ET AL.

Examiner

George P. Wyszomierski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,8-14,17,18 and 29-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,8-14,17,18 and 29-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-6, 8-14, 17, 18, and 29-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (PG Publication 2003/0115749), for reasons of record in the prior Office Action.

Chen discloses forming a plurality of electrical contacts upon a substrate that is relatively insensitive to electromagnetic fields, and induction heating the contacts in an oscillating electromagnetic field, until such time as each of the electrical contacts obtains a defined heat-treatment temperature greater than ambient. With particular relevance to the presently claimed limitation of treating different portions of each of the electrical contacts by different first and second amounts, note that Chen paragraph [0028] indicates that in at least some embodiments of the prior art, it is "desirable to achieve a defined time-temperature profile in each of the separate microelectronic structures to be heated." Note further that paragraph [0032] of Chen describes placing small dots of temperature sensitive material at selected locations on the structures prior to heating in order to monitor the temperature at multiple locations on the structures.

With respect to instant claims 4, 17, 30, 31, 34 and 35, paragraph [0031] of Chen indicates that two properties to be monitored in such a process are yield strength and/or spring constant, which would indicate that one would carry out the steps as defined in the instant claims when performing the prior art process.

With respect to instant claims 8, 29, 32, 33 and 36, Chen Figures 3, 9C, and 11D indicates that mounting of the electrical contacts of the prior art in a manner as defined in the instant claims would be within the purview of the prior art process.

Finally with respect to the limitations of instant claims 8, 12, 13 and 18 in regard to the alignments of the contacts relative to the magnetic field, Chen paragraphs [0026]-[0028] describe how the magnetic field relates to the time-temperature profiles desired, one of the factors being the configuration of the electromagnetic field. One of skill in the art would wish to align the parts being treated to take maximum advantage of the magnetic fields used in the prior art process, i.e. to align the contacts relative to the magnetic field in a manner as defined in the instant claims.

The prior art does not specifically disclose any examples of the differential heat treatment as required by the instant claims. However, the disclosures in Chen paragraphs [0028] and [0032] described supra indicate the desirability of carrying out the Chen process in such a manner that a differential heat treatment is achieved. Therefore, the disclosure of Chen '749 is held to create a prima facie case of obviousness of the presently claimed invention.

3. In a response filed February 21, 2006, Applicant alleges that the prior art does not disclose any embodiments where different portions of each individual contact are subject to a differential heat treatment, and/or that the exemplary embodiments of Chen would appear to contradict the instant claims with regard to both temperature differential and to intensity of electromagnetic field. Applicant's arguments have been carefully considered, but are not persuasive of patentability because:

a) With regard to differential heat treatment, the examiner's position is that the disclosure in paragraph [0028] of Chen referring to "a defined time-temperature profile in each of the

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separate microelectronic structures to be heated" [emphasis added] at least suggests the differential heat treatments as defined in the instant claims.

b) With regard to the exemplary embodiments of Chen, it is well-settled that a reference must be evaluated for all that it discloses to one of skill in the art, and not merely for preferred or exemplary embodiments therein.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the new central facsimile number, (571)-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GPW
April 12, 2006


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1700